

## In the Claims

1 1. (currently amended) A method for reduced spatial resolution transcoding  
2 of a compressed bitstream of a sequence of frames of a video signal,  
3 comprising:  
4 decoding the frames;  
5 storing the decoded frames in a first frame buffer;  
6 down-sampling, in a down-sampler, the decoded frames to a output  
7 reduced resolution frames;  
8 storing the reduced resolution frames output by the down-sampler in a  
9 second frame buffer;  
10 motion compensating with reduced resolution motion vectors of the  
11 stored reduced resolution frames; and  
12 partially encoding the reduced resolution frames to produce a reduced  
13 resolution compressed bitstream of the video.

1 2. (original) The method of claim 1 wherein the decoding further comprises:  
2 variable length decoding of the bitstream to yield an output  
3 comprising full-resolution motion vectors and quantized DCT coefficients  
4 for each block in each frame;  
5 inverse quantizing the quantized DCT coefficients for each block in  
6 each frame;  
7 applying an inverse DCT to the inverse quantized blocks of the  
8 frames; and  
9 motion compensating with full resolution motion vectors of the stored  
10 decoded frames.

1 3. (currently amended) The method of claim 1 wherein the partial encoding  
2 further comprises:  
3 ~~motion compensating with reduced resolution motion vectors of the~~  
4 ~~stored reduced resolution frames;~~  
5 applying a DCT to the motion compensated difference of the reduced  
6 resolution frames;  
7 quantizing DCT blocks of the frames; and  
8 variable length coding the quantized blocks of the frames.

1 4. (original) The method of claim 2 wherein the motion compensating during  
2 the decoding further comprises:  
3 adding a full resolution motion compensated prediction of a previous  
4 decoded frame to the current frame.

1 5. (original) The method of claim 3 wherein the motion compensating during  
2 the partial encoding further comprises:  
3 subtracting a reduced resolution motion compensated prediction of a  
4 previous reduced resolution frame from the current reduced resolution  
5 frame.

1 6. (original) The method of claim 3 further comprising:  
2 estimating the reduced resolution motion vectors from the reduced  
3 resolution frames.

1 7. (original) The method of claim 2 further comprising:

2 mapping the full-resolution motion vectors to the reduced resolution  
3 motion vectors from the variable length decoded frames.

1 8. (currently amended) A closed-loop transcoder for reduced spatial

2 resolution transcoding of a compressed bitstream of a sequence of frames of  
3 a video signal, comprising:

4 a decoder with motion compensation using full resolution motion  
5 vectors stored in a first frame buffer to generate partial decoded frames from  
6 the compressed bitstream;

7 a down-conversion block to down-sample the decoded frames to  
8 output reduced resolution frames with reduced resolution motion vectors;  
9 and

10 a partial encoder with motion compensation using the reduced  
11 resolution motion vectors stored in a second frame buffer to generate a  
12 reduced spatial resolution compressed bitstream of the video.